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APPL. NO. 10/805,783

ATTY. DOCKET NO.: 2003P18810US

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of cooling an ultrasound transducer array, the method comprising:
immersing, at least partially, said transducer array in a volume of fluid contained within a housing carried within a transducer case, said fluid comprising a first portion occupying a first location in said housing, said first location being proximate to said transducer;
receiving thermal energy from said transducer by said first portion;
inducing movement of said fluid within said housing;
moving, in response to said inducing, said first portion having said thermal energy from said first location to at least a second location in said housing, said second location being different from said first location;
moving, in response to said inducing, a second portion of said fluid to said first location; and
receiving thermal energy from said transducer by said second portion.
2. (Original) The method of Claim 1, wherein said transducer is operative to move within said housing, said inducing further comprising moving said transducer.
3. (Original) The method of Claim 2, wherein said transducer requires initialization prior to movement, said inducing further comprising bypassing said initialization.
4. (Original) The method of Claim 1, further comprising:
providing a fluid moving mechanism located in said housing; and wherein said inducing further comprises activating said fluid moving mechanism.

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5. (Original) The method of Claim 1, further comprising:
sensing a temperature of at least a third portion of said fluid; and
wherein said inducing movement further comprises inducing movement of
said fluid based on said sensed temperature.
6. (Original) The method of Claim 1, wherein at least a third portion said fluid
comprises a first phase and a second phase, said inducing further comprising
causing said third portion to change from said first phase to said second
phase.
7. (Original) The method of Claim 6, wherein said first phase comprises one of a
liquid and solid and said second phase comprises one of liquid and gas.
8. (Original) The method of Claim 1, wherein said fluid comprises a mixture of
liquid and gas.
9. (Original) The method of Claim 1, further comprising:
operating said transducer to image a subject; and
wherein said inducing further comprises waiting for said operating to cease
before inducing said movement.
10. (Original) The method of Claim 9, wherein said inducing further comprises
forcing said operating to cease.
11. (Currently Amended) An ultrasound transducer module carried within a
transducer case, the ultrasound transducer module comprising:
a housing carried within a transducer case;
a fluid contained within said housing;
a transducer located in said housing and at least partially immersed in said
fluid, wherein said fluid comprises a first portion occupying a first
location in said housing, said first location being proximate to said
transducer, said first portion operative to receive thermal energy from

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said transducer; and
a fluid moving mechanism located in said housing and operative to induce movement of said fluid within said housing wherein said first portion having said thermal energy is induced to move from said first location to a second location in said housing, said second location being different from said first location, and further wherein a second portion of said fluid is induced to move to said first location, said second portion being operative to receive thermal energy from said transducer.

12. (Currently Amended) The ultrasound transducer module of Claim 11, wherein said transducer is movable within said housing, said fluid moving mechanism comprising said movable transducer.
13. (Currently Amended) The ultrasound transducer module of Claim 11, wherein said fluid moving mechanism comprises at least one of a pump, paddle, rotor, impeller, and electrokinetic device.
14. (Currently Amended) The ultrasound transducer module of Claim 11, wherein said fluid moving mechanism further comprises a controller and a temperature sensor coupled with said controller and thermally coupled with said fluid to sense a temperature of at least a third portion of said fluid, said controller operative to control said fluid moving mechanism based at least on said sensed temperature.
15. (Currently Amended) The ultrasound transducer module of Claim 11, wherein at least a third portion of said fluid comprises a first phase and a second phase, said fluid moving mechanism being further operative to cause said third portion to change from said first phase to said second phase.
16. (Currently Amended) The ultrasound transducer module of Claim 15, wherein said first phase comprises one of a liquid and solid and said second phase comprises one of liquid and gas.

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17. (Currently Amended) The ultrasound transducer module of Claim 11, wherein said fluid comprises a mixture of liquid and gas.
18. (Currently Amended) An ultrasound transducer module carried within a transducer case, the ultrasound transducer module comprising:
means for immersing, at least partially, said transducer module in a volume of fluid contained within a housing, said fluid comprising a first portion occupying a first location in said housing, said first location being proximate to said transducer such that said first portion receives thermal energy from said transducer;
means for inducing movement of said fluid within said housing, causing said first portion having said thermal energy to move from said first location to at least a second location in said housing, said second location being different from said first location, and causing a second portion of said fluid to move to said first location to receive thermal energy from said transducer.